

# Regional Control Measure Efforts

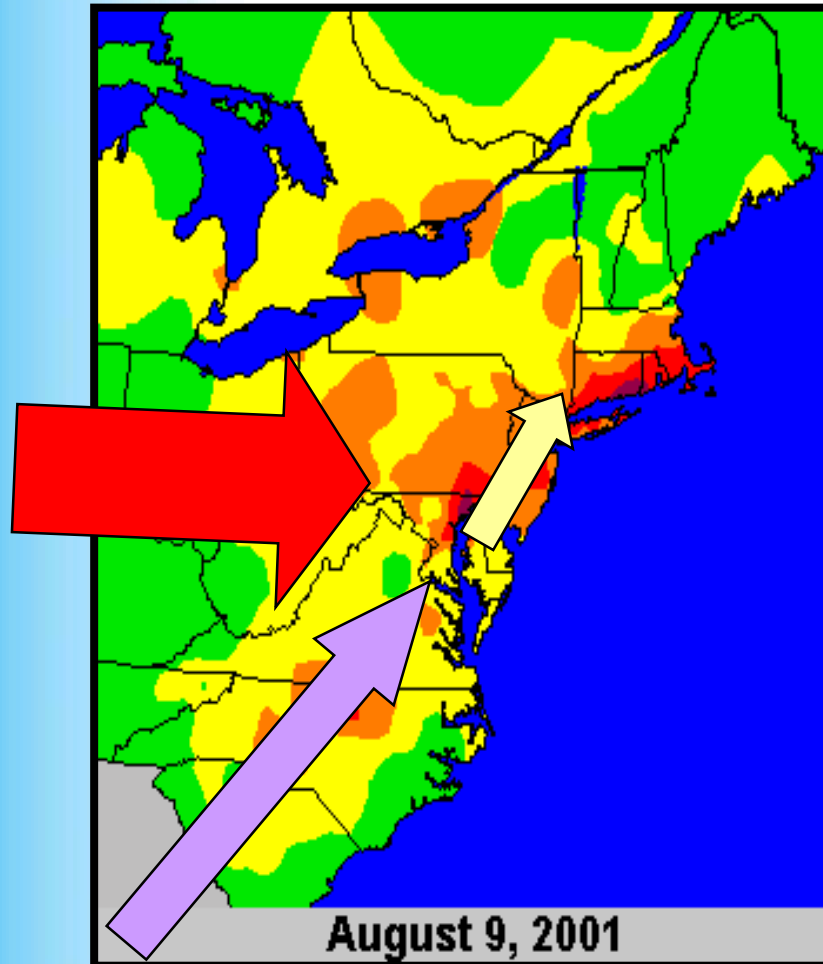


Tonalee Key  
Division of Air Quality  
June 29, 2005

# Overview

- Where does our air pollution come from?
- What is New Jersey's 'region'?
- What are the sources of regional emissions?
- What is the region doing to address emission sources?

# Where does our air pollution come from?



## Four Distinct Parts

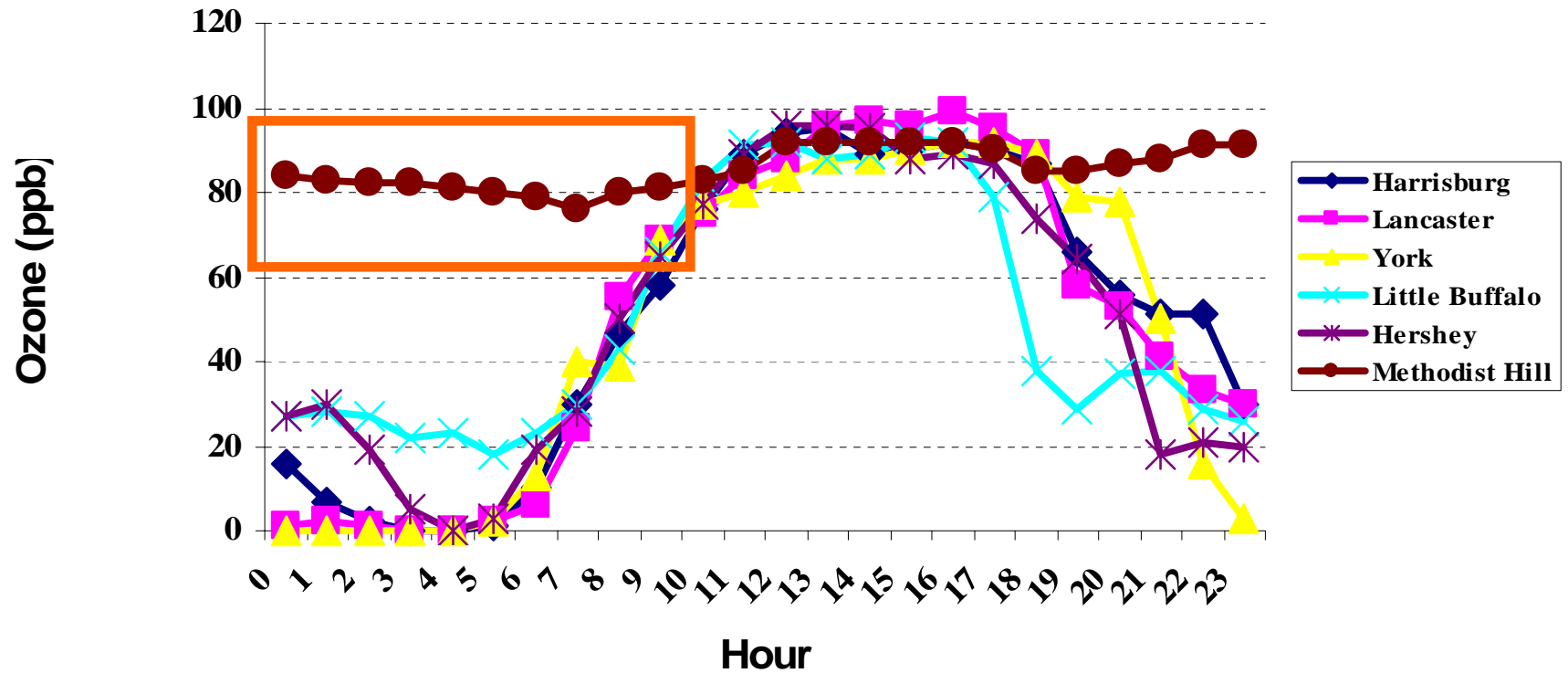
- Local emissions
- Three types of transport
  - Short range
    - PA/MD to NJ to CT, etc.
  - Long range (synoptic scale)
    - 100s of miles
    - Generally from W or NW
  - Low Level Night-Time Jets
    - 100s of miles
    - SW to NE along the Atlantic
  - All types of transport collect in an “elevated reservoir” of ozone and other pollutants

# The Elevated Ozone Reservoir



# Southcentral Pennsylvania

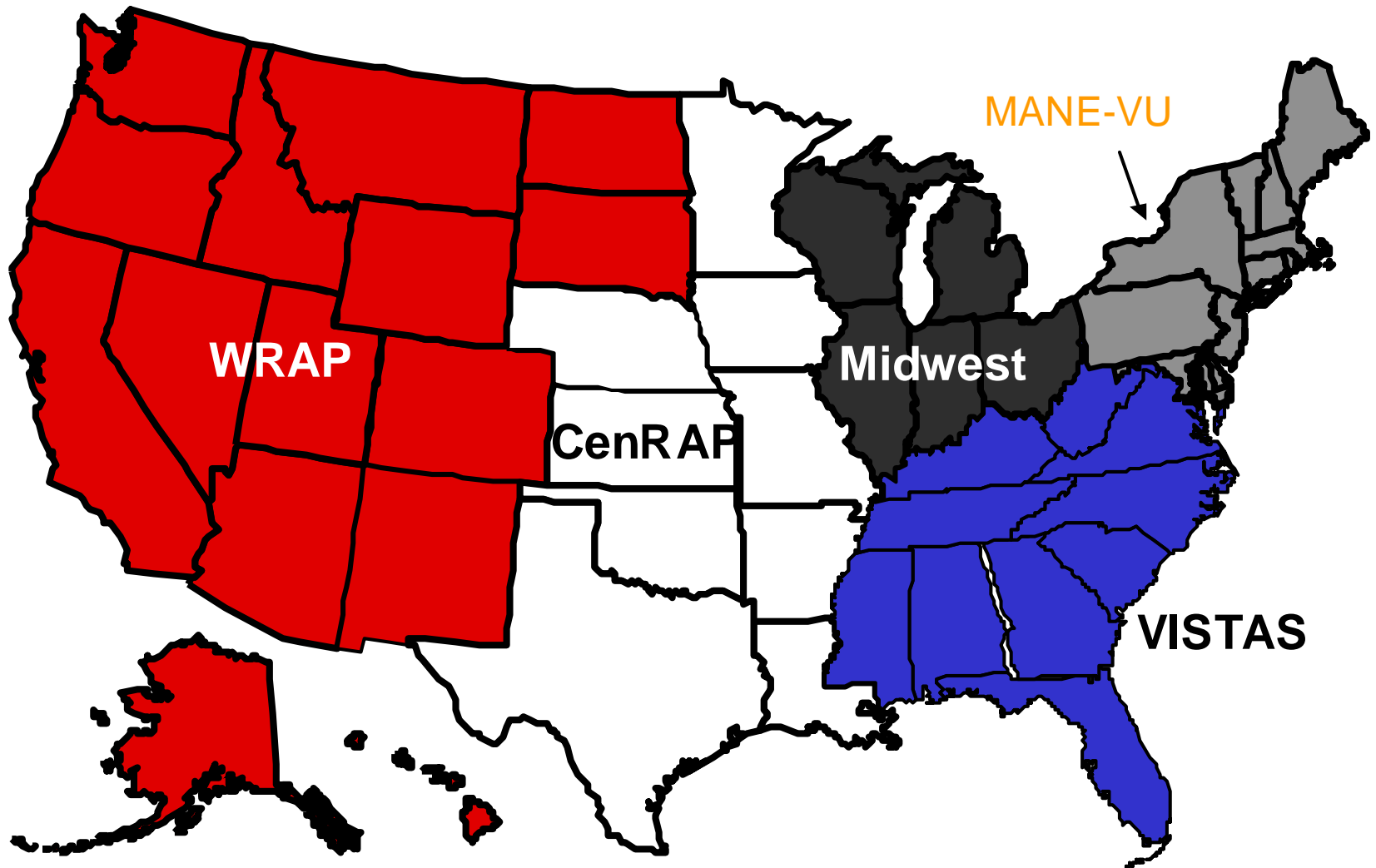
May 29, 1999



# What is New Jersey's 'region'?

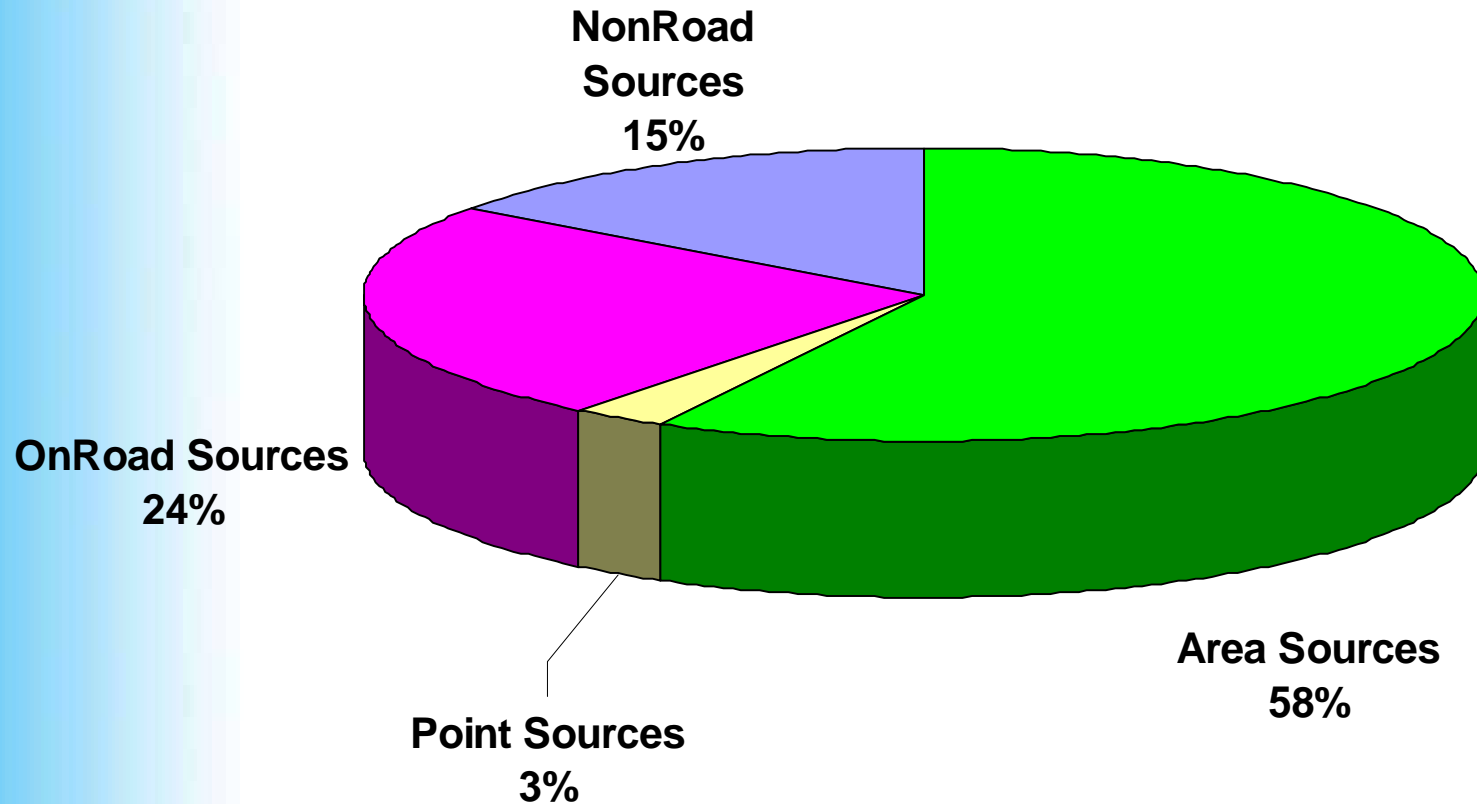
- **Ozone, part of:**
  - Two multi-state nonattainment areas
  - Ozone Transport Commission (OTC)
- **Fine Particulate Matter, part of:**
  - Two multi-state nonattainment areas
- **Regional haze, part of:**
  - Mid-Atlantic / Northeast Visibility Union (MANE-VU)

# What are the sources of regional emissions?



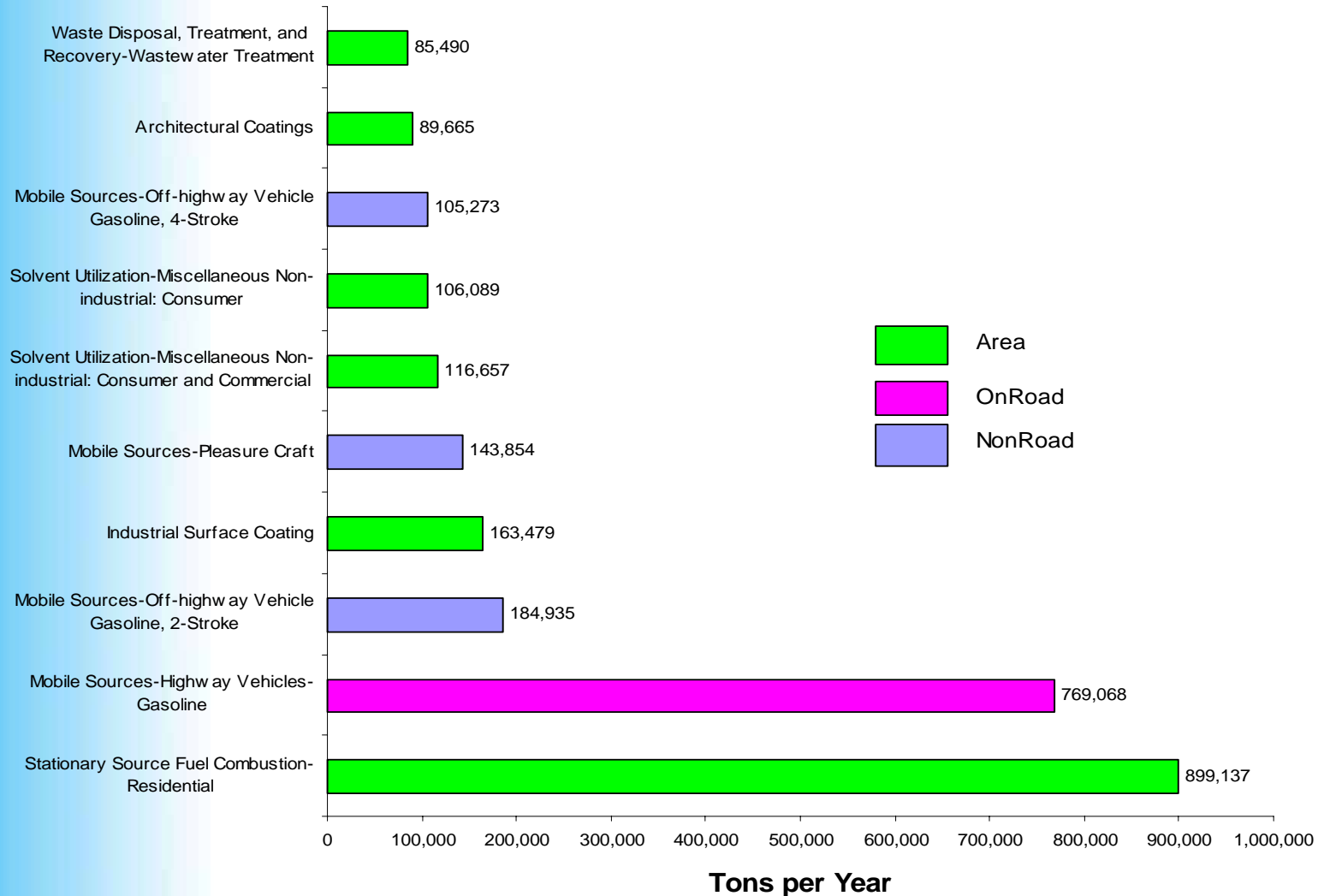
## 2002 MANE-VU Region VOC Emission Inventory

Total VOC Emissions: 3,252,655 Tons per Year



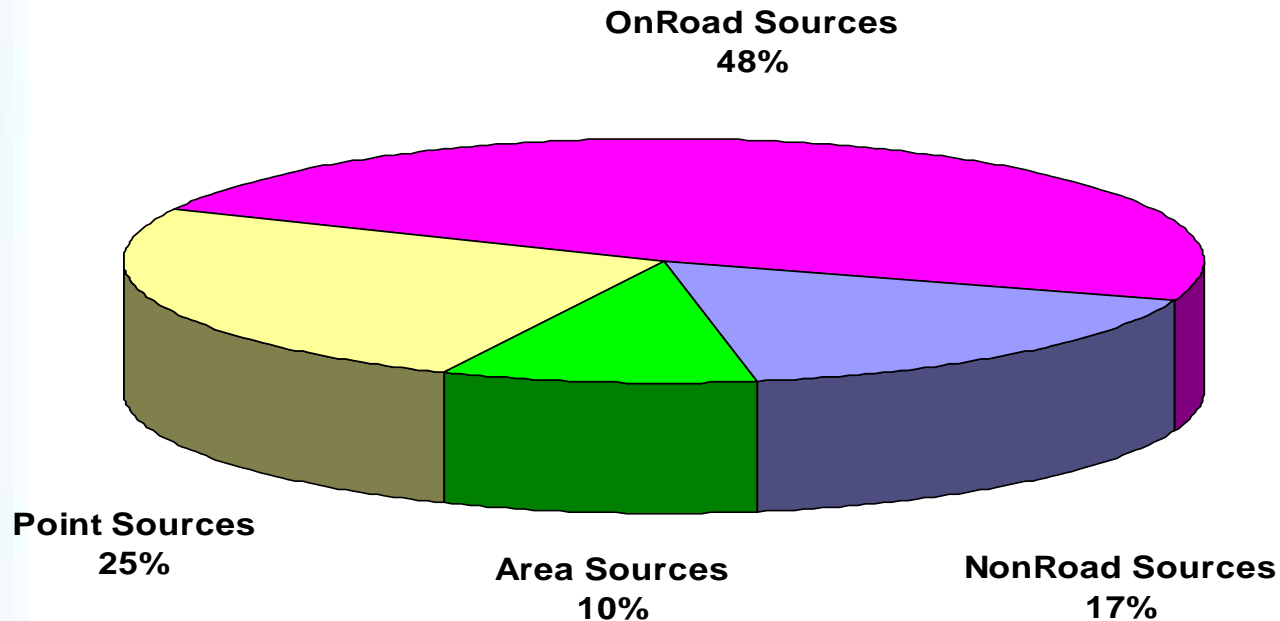


# 2002 MANE-VU Region VOC Emission Inventory Top 10

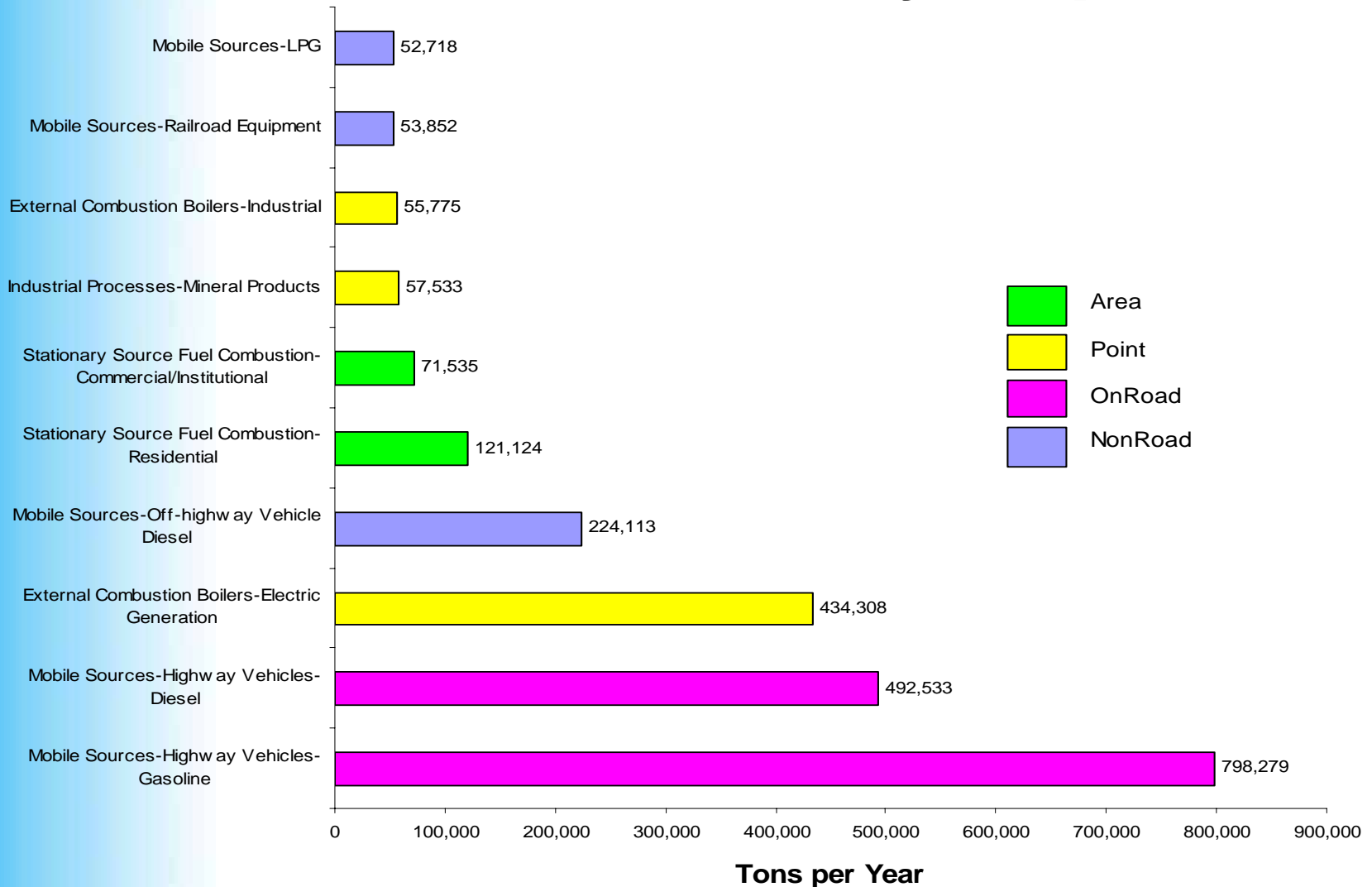


# 2002 MANE-VU Region NO<sub>x</sub> Emission Inventory

Total NO<sub>x</sub> Emissions: 2,676,759 Tons per Year

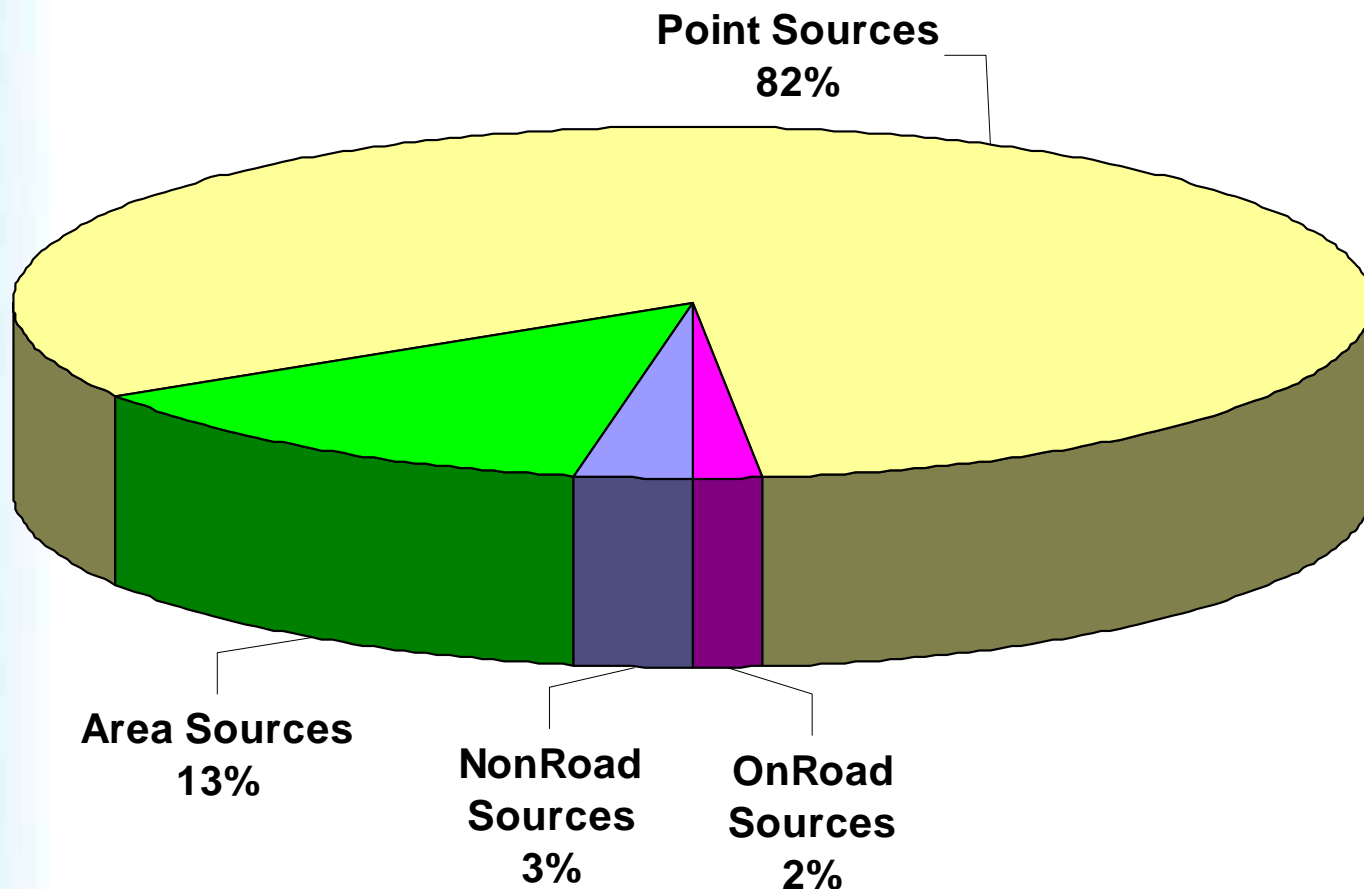


# 2002 MANE-VU Region NO<sub>x</sub> Emission Inventory Top 10

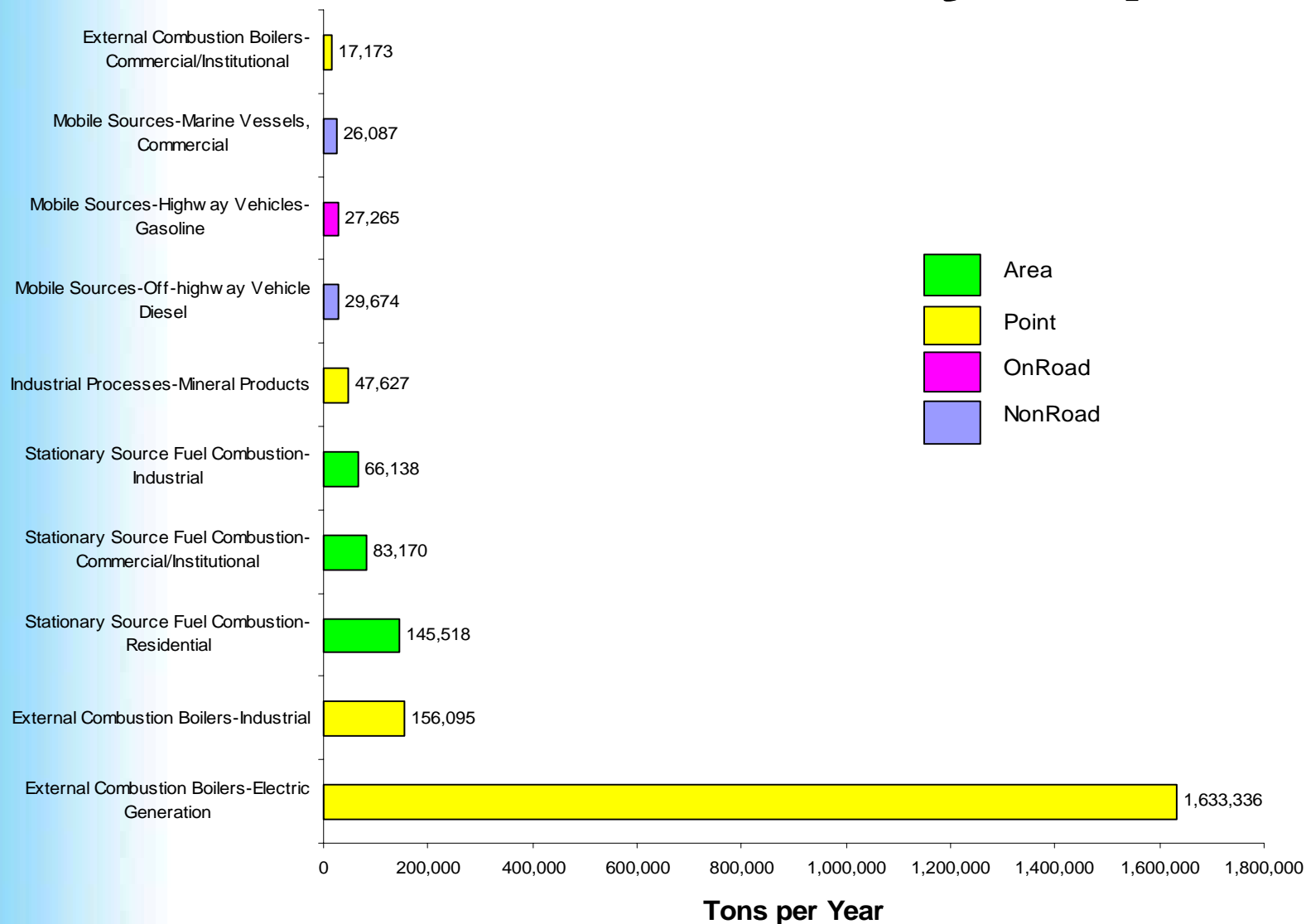


# 2002 MANE-VU Region SO<sub>2</sub> Emission Inventory

Total SO<sub>2</sub> Emissions: 2,326,340 Tons per Year

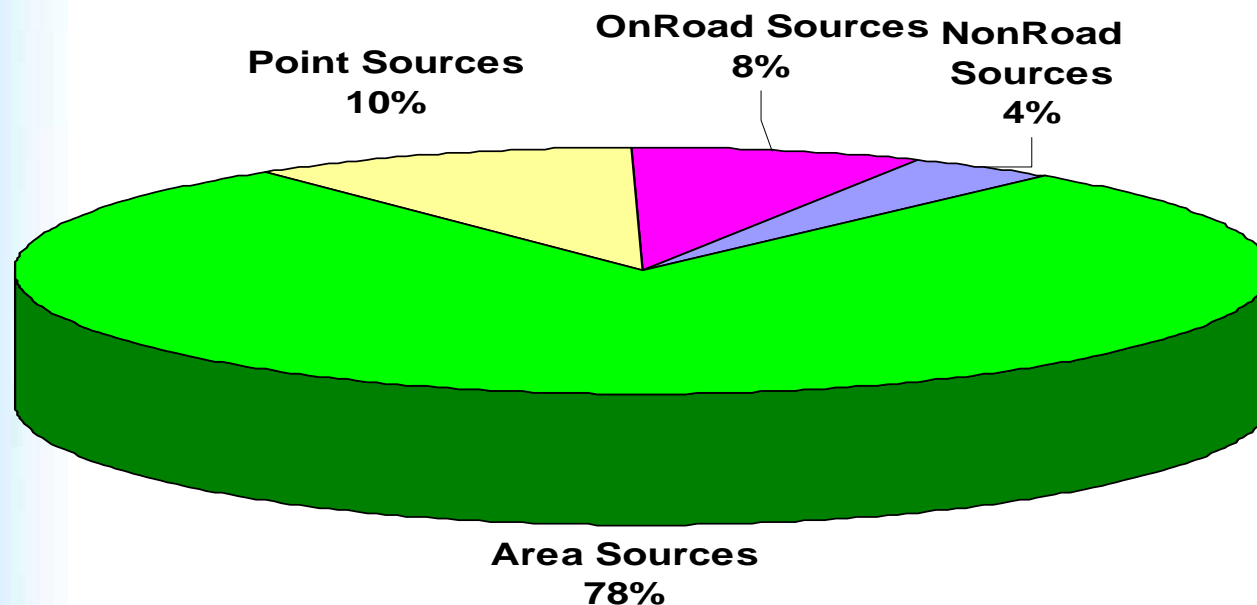


# 2002 MANE-VU Region SO<sub>2</sub> Emission Inventory Top 10



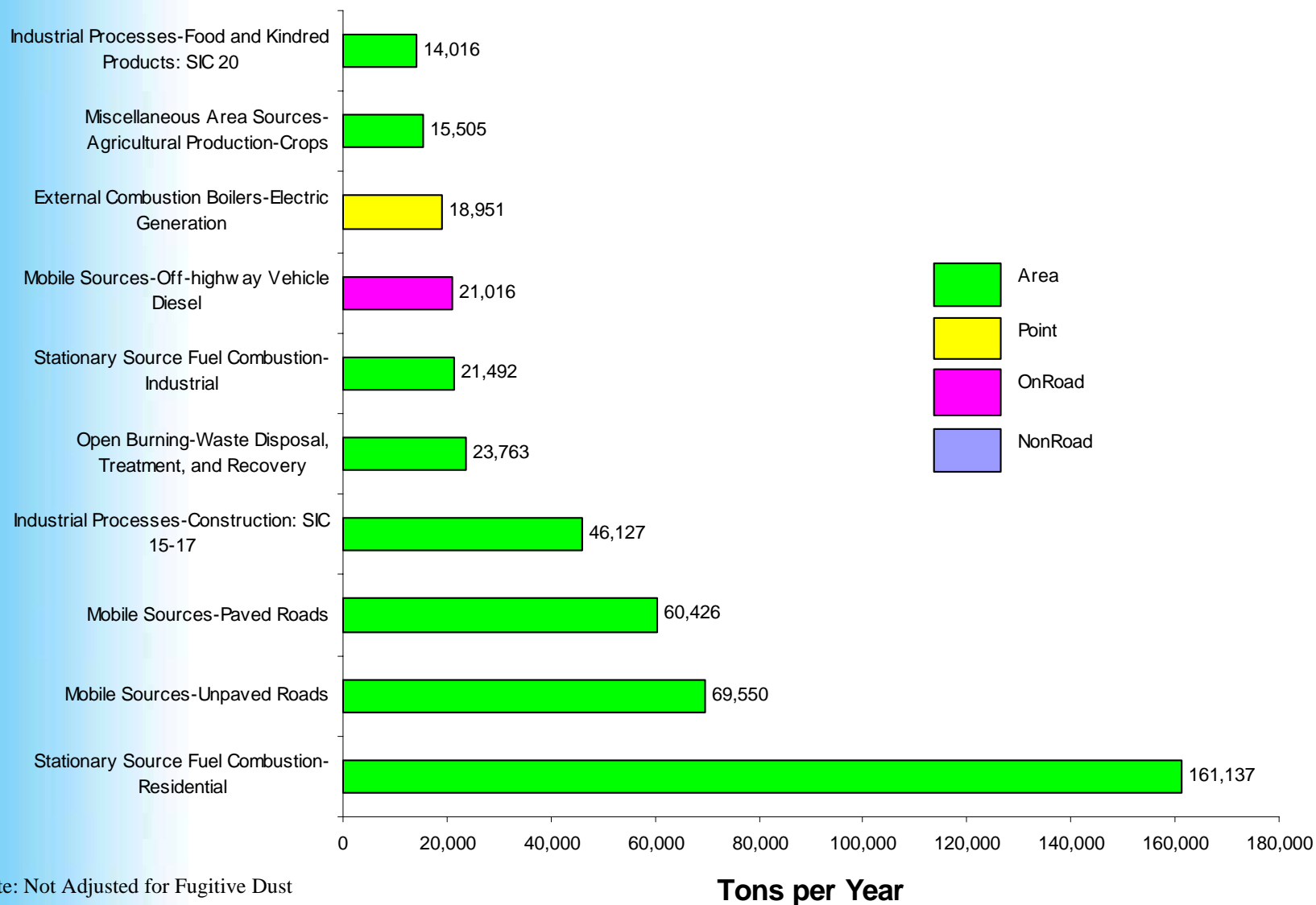
# 2002 MANE-VU Region PM<sub>2.5</sub> Emission Inventory

Total PM<sub>2.5</sub> Emissions: 560,219 Tons per Year



Note: Not Adjusted for Fugitive dust

# 2002 MANE-VU Region PM<sub>2.5</sub> Emission Inventory Top 10



# **What is the region doing to address emission sources?**

- **Two major efforts working towards reducing emissions on a regional scale**
  - OTC - addressing transport issues associated with ozone and its precursors (VOC & NO<sub>x</sub>)
  - MANE-VU - addressing visibility impairment (regional haze), including PM<sub>2.5</sub>, which is a primary component of haze
- **Regional scale efforts supported by sub-regional organization efforts**



# Control Measure Development Efforts

- **Multi-Pollutant Attainment Program**  
(OTC)
  - VOC, NO<sub>x</sub>, SO<sub>2</sub>, Hg & possibly CO<sub>2</sub> at stationary sources
  - Peaking Units
  - Distributed Generation

# **Control Measure Development Efforts** (continued)

- **Control Measure Analysis & Development (OTC)**
  - Identification & cataloging of new control measures to determine:
    - reasonableness of implementation on a regional scale
    - feasibility of implementing in states that currently do not employ a measure
- **Reasonably Available Control Technology (RACT) (OTC)**
  - Update
  - Benchmark

# **Control Measure Development Efforts** (continued)

- **Corridor Approach for Diesel Emissions**  
(OTC & NESCAUM)
  - Mobile source emissions along intrastate roadways
  - Possible strategies:
    - Truck stop electrification
    - Chip reflash
    - Idling
    - I/M enhancement (gasoline & diesel)

# **Control Measure Development Efforts** (continued)

- **Refineries** (MARAMA)
- **Low Sulfur Fuels** for residential /industrial/commercial uses (MANE-VU & NESCAUM)
- **Diesel retrofits** (MANE-VU & NESCAUM)

**So little time...**



**We need your ideas & help**